

HIGH-AFFINITY MELATONIN RECEPTORS AND USES THEREOF

Abstract of the Disclosure

Disclosed are cDNAs and DNAs encoding high-affinity melatonin 1a and 1b receptors and the recombinant polypeptides expressed from such cDNAs. The recombinant receptor polypeptides, receptor fragments and analogs expressed on the surface of cells are used in methods of screening candidate compounds for their ability to act as agonists or antagonists to the effects of interaction between melatonin and high-affinity melatonin receptor. Agonists are used as therapeutics to reentrain endogenous melatonin rhythms as a means of treating circadian rhythm disorders in humans and control reproductive cycles in seasonally breeding animals. Antagonists are used as therapeutics to control the initiation or timing of puberty in humans. Antibodies specific for a high-affinity melatonin receptor (or receptor fragment or analog) and their use as a therapeutic are also disclosed.

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